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ROUTING AND RECORD SHEET

SUBJECT: (Optional)
25X1 U.S. TV Broadcast to the USSR

25X1 FRC
25X1 Director, Foreign Broadcast Information Service

EXTENSION

NO. DDS&T 525/86

DATE 22 July 1986

TO: (Officer designation, room number, and building)	DATE RECEIVED	DATE FORWARDED	OFFICER'S INITIALS	COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)
1. Director of Development and Engineering				Evan,
25X1 2.				The memo puts you in front if the Director wishes to pursue this topic. My own feeling is that the idea is about 15 years premature. I am convinced that we should answer the questions of paragraph 7 prior to expending any significant additional S&T systems engineering resources.
3. Deputy Director for Science and Technology Room 6E45, Headquarters				
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DDS&T 525-86
Signed Retd 7/21/86

MEMORANDUM FOR: Director of Central Intelligence

VIA: Deputy Director of Central Intelligence
Executive Director

FROM: R. E. Hineman
Deputy Director for Science and Technology

25X1 SUBJECT: U.S. TV Broadcast to the USSR [redacted]

REFERENCE: Memo for DCI fm DDS&T, dtd 23 May 86, Subj: Reader's
25X1 Digest Draft, The Kremlin Under Siege [redacted]

1. As indicated in the reference, we have pursued the question of satellite broadcast of U.S. TV to the USSR. You will recall that the draft Reader's Digest story described TV direct broadcast satellite systems and postulated easy availability within the USSR of the elements of a modest receiving system. This memorandum provides initial cost estimates for workable satellite configurations, reiterates the important
25X1 questions to be answered, and proposes a near-term plan of action. [redacted]

2. Any technical system definition is constrained by the availability of proven spacecraft components, particularly high-power transmitters, and the requirement that the ground receiving antenna be as small as possible. This leads directly to a system whose geographical coverage beam is small compared to the USSR. This analysis assumes three transmitting subsystems covering the major population areas--two west of
25X1 the Urals and one for the far east. [redacted]

3. Important to the sizing of the spacecraft is prime power and weight, which for the TV mission (3 subsystems) are 2,500 watts and 500 pounds respectively. With spacecraft housekeeping and antijamming provisions the result is a relatively large satellite requiring a significant percentage of the space shuttle's launch capability, or an expendable launch vehicle. An alternative to a single satellite is three separate TV payloads added to host satellites. Each payload would weigh 200 pounds and require 800 watts of prime power. There are no existing

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or planned satellite programs that can easily (inexpensively) accommodate such an addition. The estimated costs for the alternatives discussed above are:

a. Dedicated satellite, $300M
b. Launch for a, $150M
c. Separate payload (1 of 3), $80M, including integration costs
25X1 d. Antijamming provisions, $55M

4. The use of satellites for international broadcasting is governed by the International Telecommunications Union (ITU) Radio Regulations. These regulations are the product of the World Administrative Radio Conference (WARC) of 1979. They were ratified by the U.S. Senate and signed into law by the President in 1983. Article 30 of the ITU rules includes the following major provision which applies to broadcasts from satellites:

> Section II. Broadcasting Satellite Service: "All technical means available shall be used to reduce, to the maximum extent practicable, the radiation over the territory of other countries unless an agreement has been previously reached with such countries."

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5. What we now have is a costly system, the operation of which contravenes all relevant international broadcasting conventions. However, many of the arguments against this proposal are the same arguments used years ago to oppose international radio broadcasting. In the absence of international agreement the U.S. could broadcast television unilaterally with whatever justifications or apologies seemed appropriate. The success of the effort would depend on the size of the viewing audience. The Reader's Digest author envisions that a person in the USSR could use a pieplate size antenna and $35 worth of electronics. This is too fanciful. The technical analysis supporting this study assumes a 3-foot diameter antenna--the smallest practical size given the laws of physics and spacecraft technical constraints. Further, while begging the question of accessibility of electronics, the $35 cost is low by a factor of
25X1 between 10 and 100.

6. Estimating the size of the viewing audience is a formidable task. While TV is spreading rapidly throughout the USSR and audience statistics prepared for Radio Free Europe and Radio Liberty are impressive, it is difficult to visualize a large number of unauthorized receiving systems in place in the near future. There is strong interest

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in and increasing availability of VCRs within the USSR, however. A more plausible scenario would see distribution of U.S. TV by means of video tapes recorded at a relatively small number of unauthorized receiving stations. While plausible, audience estimates thus far are no more than
25X1 uninformed DS&T speculation.

7. The effort to date to size the satellite system has been sufficiently rigorous to establish the credible technical and cost bounds discussed above. The next steps in this aspect of a system study are obvious but will require a significant commitment of resources. As a prerequisite to further technical studies I believe we must answer the following questions:

a. Can U.S. TV change opinions and attitudes in the USSR and is the effort worth the large commitment of resources indicated?

b. Will the U.S. beam TV by satellite directly into USSR population centers in violation of treaties and conventions to which we are publicly committed?

25X1 c. What is the best estimate of the viewing audience?

8. I recommend that an Agency-wide working group be established to critique the basic proposal, address the questions in paragraph 7, articulate the system requirements at necessary levels of detail, and refine the system definition and cost estimates. I will be happy to lead this effort with initial representation from the DI, DO, OGC, and DS&T. There are a number of external involvements which will follow in due course. One of these is with USIA, for which a personal approach by you appears appropriate. Mr. Charles Wick with his WORLDNET initiative has the lead, and I expect believes he has the charter, in this area. I believe your personal involvement will be helpful and necessary here and elsewhere since this initiative will change the status quo in a number of
25X1 areas.

R. E. Hineman

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DDS&T/FBIS/[redacted] (1 Jul 86)

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